taken for the common little squirrel (*Sciurus hippurus*), of which it has much the appearance. When alarmed it quickly darts up the trunk of the nearest tree, but it is a poor climber, and never seems to go high up like the squirrel. Besides these points of resemblance, it appears to be largely frugivorous. It was found that the seeds sown in boxes were constantly being dug up and devoured by some animal, and traps baited with pieces of coco-nut or banana were set, and a number of tupaias were caught. These being put into a cage appear to live very comfortably upon bananas, pine-apple, rice, and other such things; refusing meat. The Rev. T. G. Wood, in his "Natural History," states that *T. ferruginea* is said to feed on beetles, but to vary its diet with certain fruits. The common species at Singapore seems to be almost entirely frugivorous, though its teeth are those of a typical insectivore.

THE thirtieth Bulletin of the Botanical Department, Jamaica, contains a careful paper, which ought be be very useful, on the sugar-cane borer, by which much damage is being done in sugar plantations. The author is Mr. T. D. A. Cockerell, Curator of the Institute of Jamaica. Another contributor to the Bulletin, writing of gardening in Jamaica, mentions that about a year ago Messrs. Cannel and Sons, Swanly, Kent, sent her some small plants of chrysanthemums by post. They were all new and valuable; and the English season being so short, Messrs. Cannel and Sons begged her to try whether she could succeed in getting seed from these for them, offering to send her a collection of choice chrysanthemums in repayment of her trouble should she be successful. Out of the six plants one died, killed by a grub; the rest turned out magnificent, blowing with a profusion such as she had seldom seen before—they were perfect umbrellas of bloom; but the flowers died off without seeding. The plants then threw out a perfect little forest of offsets, and she finds that any cuttings broken off from the old plants will root easily.

A METHOD of rabbit-destruction which has been tried with considerable success in the Hay district, is recommended by the *Agricultural Gazette of New South Wales* as worthy of the consideration of pastoralists throughout the colony, more especially where the rainfall is light. The destroying agent is poisoned water, which is prepared as follows:—Cover 1 ounce of strychnine with concentrated hydrochloric acid, or what is commonly known as strong muriatic acid or spirits of salts, and leave to soak all night. The mixture easily dissolves in half a gallon of boiling water. After making the solution, bottle off and use as required. A pint of the mixture will poison 60 gallons of cold water; possibly a weaker mixture might be efficacious. This system has been adopted at Benerembah Station, sixteen shallow 8- to 10-gallon troughs being used to each tank, and the number of rabbits poisoned at each tank nightly is stated to be 10,000. In the Mossgiel district no less than 27,000 rabbits were destroyed in two weeks by the use of poisoned water.

THE idea of flower-farming for perfumes seems to be exciting a good deal of interest in New South Wales, as many inquiries on the subject have lately been submitted to the Agricultural Department. There are at present in the colony no means of illustrating the practical operations of this industry, but the *Agricultural Gazette of New South Wales* hopes that this deficiency will soon be supplied by the institution of experimental plots on one or more of the experimental farms. The *Gazette* points out that in scent farms large quantities of waste material from nurseries, gardens, orchards, and ordinary farms might be profitably utilized, while occupation would be found for some who are unfit for hard manual labour. A Government perfume farm was lately established at Dunolly, in Victoria, and this promises to be remarkably successful.

AT the meeting of the Field Naturalists' Club of Victoria on March 14, Prof. Baldwin Spencer, the President, gave an interesting account of a trip he had made to Queensland in search of Ceratodus. Special interest attaches to this form, since it is the Australian representative of a small group of animals (the Dipnoi) which is intermediate between the fishes and the amphibia. Ceratodus has its home in the Mary and Burnett Rivers in Queensland, whilst its ally, Lepidosiren, is found in the Amazon, and another relative, Protopterus, flourishes in the waters of tropical Africa. Although unsuccessful in obtaining the eggs of Ceratodus, owing to the early season, Prof. Spencer was able, from a careful study of the surroundings under which the animal lives, to infer that its lung is of as great a service to it during the wet as during the dry season—a theory in direct opposition to the generally accepted one that the lung functions principally during the dry season, when the animal is inhabiting a mud-cocoon within the dry bed of the river.

THE additions to the Zoological Society's Gardens during the past week include a Macaque Monkey (*Macacus cynomolgus*) from India, presented by Mr. Oswald Norman; a Common Fox (*Canis vulpes*), British, presented by Mrs. Onslow Wakeford; two Four-horned Antelopes (*Tetraceros quadricornis* ♀ ♀) from India, presented by Mr. W. F. Sinclair; a Magellanic Goose (*Bernicla magellanica*) from the Falkland Islands, presented by the Rev. J. Chaloner; six Common Lizards (*Lacerta vivipara*), a Slowworm (*Anguis fragilis*), British, presented by Mr. Percy W. Farmborough; three Little Green-winged Doves (*Chalcophaps chrysochlora*) from North Queensland, deposited; two Diamond Snakes (*Morelia spilotes*), a Punctulated Tree Snake (*Dendrophis punctulatus*), a Bearded Lizard (*Amphibolurus barbatus*), a Burton's Lizard (*Lialis burtoni*) from Australia, received in exchange; a Great Kangaroo (*Macropus giganteus*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

THE LATE NEW STAR IN AURIGA.—A very interesting table, showing a summary of all the observations made with regard to the magnitude of the late new star in Auriga, will be found in *L'Astronomie* for June. Commencing with the photographs taken by Prof. Pickering, when the Nova was very nearly of the 12th magnitude, the table shows a tremendous increase of brilliancy up to December 18, when it had reached a maximum, its magnitude then being about 4·5. From that date to March 2, the diminution in intensity was only very slight, being reduced only by about one magnitude, but, subsequent to this, the fading was nearly as rapid as the brightening, the star diminishing, on an average, a magnitude in a period of about 3·2 days.

PHOTOGRAPHIC MEASURES OF THE PLEIADES.—The third number of the "Contributions from the Observatory of Columbia College, New York," consists of the Rutherfurd photographic measures of the group of the Pleiades reduced by Mr. Harold Jacoby. These photographs were among the complete set of original negatives that were presented to this Observatory by Mr. Rutherfurd, and were taken in the years 1872 and 1874. This special group was chosen for reduction in order to investigate the accuracy obtainable by the methods employed, and the results show that the reduced places can be thoroughly relied upon. The table containing a catalogue of the stars in question gives the places for the epoch 1873·0, together with the precessional and secular variation. In the discussion of the results, the Yale and Könisberg heliometer measures have been used for the sake of comparison, and Mr. Jacoby clearly demonstrates that the photographic results are of very considerable accuracy. Taking the case of the right ascensions, the difference of the residuals, obtained from the Yale and New York results, and those from Yale and Könisberg, amounts in only two cases to as much as 0″·50, while the mean may be roughly estimated as less than 0″·25. That part of the table relating to the declinations furnishes equally satisfactory values, showing us that, for any future study regarding the determination of proper motions in this region, these photographic observations ought to be taken into account. The average probable errors in right ascension

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and declination amount to ± 0″·06 and ± 0″·05 respectively; the actual probable errors somewhat exceeding these values, as they involve the scale inaccuracies and other possible sources of error.

THE PLANET MARS.—In the early morning Mars is now visible on our eastern horizon. This period of 1892 will be the most favourable for observation that we have had since the year 1877. The opposition takes place on August 4 next, when the planet is near perihelion, so that its proximity to us will not be quite so great as was the case in 1877. The longitude of the planet at the time of its perihelion passage will be 333° 49′, but our earth will not reach this until August 27. The apparent diameter on the 18th of this month will amount to 17″·66, while on August 5 it will be 24″·78; the phases for these two dates will be respectively 1″·34 and 0″·05. The positions for the 17th, 21st, and 25th of this month are as ollows:—

June	R. A.	Decl.
17	21h. 16m.	−20° 4′
21	21h. 20m.	20° 7′
25	21h. 22m.	20° 13′

L'Astronomie for June contains a very interesting article by M. Camille Flammarion, in which some quite recent observations of this planet are inserted. There are also several illustrations of the physical features, including the new map by M. Lohse and the drawings made by M. Nieston during the year 1888.

GEOGRAPHICAL NOTES.

THE French Ministry of Public Instruction has authorized M. Ch. Almand, of the Natural History Museum of Limoges, to study the Seychelles Islands in detail with special reference to their fauna.

THE Geographical Society of Lima has just issued the last number of the first volume of its *Boletin*, a most creditable publication containing many articles bearing on the geography of Peru and the Andes. Amongst the more important papers in the current issue are a monograph on Lake Titicaca, a discussion of the climatology of Peru, by Dr. Luis Carranza, and the report of a recent Commission sent out by the Peruvian Government to inspect the new road across the Andes leading to the highest navigable point on the eastern rivers. The road starting from Chicla, the temporary terminus of the Oroya railway, crosses the watershed at Casapalca at 17,500 feet of elevation, passes Tarma, Palca, La Merced, and thence runs northward through a little-known region inhabited by native tribes to Puerto Tucker, at the junction of the Pichis with the navigable tributaries of the Ucayali. In referring to this road at a recent meeting of the Royal Geographical Society, the Peruvian Consul pointed out that it would be easy, if a railway were constructed following the line of this road, and connecting steamers run on the Amazon and Ucayali, to reach Lima from London in twenty days instead of a month as is now necessary. Other papers in the *Boletin* deal with the archæology of the Andes region; all branches of geography being well represented.

A NEW Russian Expedition to Eastern Tibet and Sze-chuan in China has been decided on, and will set out next year, under the leadership of M. Potanin. It is intended to spend three years in the exploration, a sum of 30,000 rubles (about £3000) being granted by the Russian Government towards the expenses. Capt. Roboroffski accompanies the expedition, on the staff of which various scientific specialists will also be placed.

AT the May meeting of the Paris Société de Géographie the great gold medal was presented to M. Élisée Reclus for his "Nouvelle Géographie Universelle," a work which, though unfinished, is of unique value, and is respected and consulted in all countries. This award is significant of the feeling that careful and conscientious collation and generalization of the work of explorers and travellers occupies a much higher place in the science of geography than has been hitherto accorded it. Amongst those to whom other gold medals were awarded are the Prince of Monaco, for oceanographical research; M. A. Paine, for explorations in Indo-China; M. J. de Morgan, for travels in Persia and Kurdistan; M. H. Coudreau, for ten years of exploration in the interior of French Guiana; and M. Alfred Fourneau, for exploration in French Congo.

NAPLES ACADEMY OF SCIENCES.[1]

THIS volume has been much delayed on account of a memoir by Prof. Trinchese on *Rhodope veranii*. That paper should have constituted the first of the present volume, but a notice leaf after the title-page informs us that it will be sent later on as a separate pamphlet. In consequence the volume starts with an elaborate paper in French, of 72 pages and three plates, by M. S. Kantor, "Sur la solution canonique du problème des transformations birationnelles périodiques," iv.e partie. This memoir treats of "Méthodes et problèmes; les caractéristiques internes et les caractéristiques permutables; les caractéristiques à 6, 7, 8 points; théorie arithmétique des caractéristiques de transformations birationnelles; les complex anallagmatiques de singularités et de la réductibilité des caractéristiques par équivalence birationnelles; les groupes impropres; les matrices birationnelles de M. de Jonquière; et sur plusieurs groupes de caractéristiques et de transformations."

Prof. F. Bassani contributes a paper on the Miocene Ichthyolites of Sardinia, from specimens collected and placed in his hands by Prof. Lovisato. The tables, cross-references, and index are admirable, and of great use to specialists in this branch. Many of our English workers, and above all, Societies, should take a lesson from this. It is occasionally the author of a paper, but far more frequently the responsible authorities of some scientific body, that are the cause of such valuable details not appearing in a paper. How often does it occur that for a paltry economy, a valuable memoir is cast upon the world a dismembered trunk, little comprehensible to the reader, and often a curse to the writer, who is exposed to all sorts of absurd criticisms because his original statements have been pruned to deformed stumps and his tables entirely suppressed.

Several old species are more fully illustrated by descriptions and neat plates drawn by Mrs. Bassani, as well as a new species of Thyrsites, Thynnus, Lamna, Myliobatis, &c.

Prof. Eugenio Scacchi has a memoir on the crystallography of certain new salts obtained by Prof. F. Mauro. The fluoximolybdate of copper is found to be monoclinic. Hypofluoximolybdate of copper is also monoclinic, whilst the hypofluoximolybdate of zinc is rhombohedral. Observations were difficult on account of the great deliquescence of these salts. The memoir is accompanied by one plate of crystal drawings.

Dr. Otto Schmiedeknecht, on his return from an entomological excursion to the Ionian Islands, placed in the hands of Prof. A. Costa all the Tenthredinidæ and Cephina that he had collected there. Prof. Costa describes these under 68 species, 9 of which are new. This is followed by a new genus of Italian Tenthredinidæ, named Laurentia, represented by the species *Laurentia Craverii*. The third section of this "Miscellanea Entomologica" is constituted by the description of four species of Armenian Hymenoptera: *Hylotoma cyanura*, *Allantus violaceipennis*, *Lissonota ducalis*, and *Lissonota decorata*. The "Miscellanea Entomologica" terminates with a new African Blattid, the *Derocalymma Brunneriana*, and is illustrated by one plate of figures in black.

Prof. G. Nicolucci, in a "Glimpse at the Ethnology of Egypt," discusses the different theories concerning the origin of the ancient Egyptians. By comparing the results obtained from historical records, monuments, anatomical observations, and descriptions of the people by ancient writers, he concludes (1) that the Egyptians belong to a white family related in prehistoric times to a Semitic branch; (2) that their physical characters form a type apart, which is clearly revealed in the monuments and the skulls obtained from the tombs of all periods; (3) that this type is the purer the more remote is the period of the monuments; (4) that it is true the immigration of other people into Egypt modified in part the primitive type of the population, but that the principal part of the Egyptians have always retained their primitive characters; (5) at the present, although the type has been crossed by intermarriage with different people in the cities, and other points frequented by strangers, it retains its original character in the Fellah, who are the true and legitimate modern descendants of the constructors of the Pyramids.

Prof. Nicolucci considers the Copts to be descended from ancient Egyptians, but with some infiltration of negro blood. The paper is accompanied by two plates, one of several modern Egyptian types, and one of the portrait of Rameses II. side by side with that of a Fellah.

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[1] *Atti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli*, Serie Seconda, vol. iv., Napoli, 1891.

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